

Residential Fire Safety Advisory Committee

c/o Honolulu Fire Department
3375 Koapaka Street, Suite H-425
Honolulu, Hawaii 96819-1869

May 31, 2005

The Honorable Donovan M. Dela Cruz, Chair
and Members of the City Council
City Council
City and County of Honolulu
Honolulu, Hawaii 96813

Dear Chair Dela Cruz and Council Members:

The Residential Fire Safety Advisory Committee (RFSAC) was established by Resolution No. 04-334, CD 1, to explore options, requirements, time frames, costs, incentives, and benefits regarding residential high-rise building safety applications. The RFSAC's findings are as follows:

1. The installation of an automatic fire sprinkler system and other life safety systems in existing residential high-rise buildings, presently not required, would significantly reduce the life safety and property damage risk from the consequences of fire.
2. The adopted Building Code of the City and County of Honolulu requires the installation of automatic fire sprinklers and other life safety systems in new residential high-rises. The adopted Fire Code of the City and County of Honolulu requires the retrofitting of automatic fire sprinklers and other life safety systems in existing high-rise hotel and business buildings.
3. During 2000-2004, fires within the City and County of Honolulu in single-family homes accounted for 43% of the structure fires, 59% of the property damage, and 95% of the fatalities.

Fires in high-rise buildings accounted for approximately 3% of the total structure fires and approximately 5% of the total property damage. There were no fatalities as a result of fires in high-rises during this time period. There were five injuries, which represent approximately 3% of those injured in fires.

Fire damage estimates in high-rise buildings with sprinklers were \$175,410 or 1% of the total property damages. Fire damage estimates in high-rise buildings without sprinklers were \$2,770,420 or 5% of the total property damages. A Structure Fire Report for the years 2000-2004 is attached (Attachment A).

4. Two listings compiled by the Department of Planning and Permitting (DPP) for approximately 300 nonsprinklered residential high-rise buildings are attached (Attachment B). The DPP estimated that there are 147,064 one- and two-family dwellings within the City and County of Honolulu.

RECEIVED

CITY COUNCIL
HONOLULU, HAWAII

JUN 21 11 40 AM '05
2005 JUN 20 P 2:40

CITY CLERK
HONOLULU, HAWAII
RECEIVED

Misc. Com. No.

1636

5. Based upon a list from the DPP regarding unsprinklered residential high-rise buildings, the Department of Budget and Fiscal Services (BFS), Real Property Assessment Division, estimates that there are approximately 24,612 individual residential high-rise dwelling units within the City and County of Honolulu. This means that there are approximately seven times more one- and two-family dwellings than there are high-rise units.
6. A cost analysis of four representative residential high-rise buildings provided by S.S. Dannaway Associates, Inc. is attached (Attachment C). The analysis is based on the best available information, given the current rise in construction activity and material costs. The fire sprinkler costs are also based on steel pipe installation and will be less if approved plastic piping is utilized.
7. The Hawaii Insurance Bureau (HIB) provided loss cost estimates for three high-rise residential and three high-rise hotel buildings (Attachment D). The loss costs represent an actuarial estimation of future costs of claims and are not the final insurance premiums. The three residential buildings had an average decrease of 12.9% for the building structure and an average increase of 31.9% for the building contents of loss costs when a sprinkler credit was applied and then removed.
8. The Honolulu City Council and the Hawaii State Legislature should consider enacting legislation to provide incentives to owners of residential structures who are willing to install fire sprinklers. Such installations will not only reduce property damage and save lives but also provide additional revenue from taxes paid by businesses involved in the installation of fire sprinklers.

The RFSAC discussed the following possible incentives to mitigate the costs of retrofitting residential high-rise buildings with automatic fire sprinklers and other life safety systems. Please note that these incentives do not reflect an agency's support or opposition for any of the listed incentives.

1. **Incentive: Extend compliance period to 10-15 years.** In the event of a fire, enclosed corridor buildings present a greater hazard to occupants due to the spread and confinement of heat and smoke within the building. These buildings would be given a shorter compliance period. Open corridor buildings present a lesser degree of hazard by allowing venting to the outside atmosphere. The extended compliance period would also allow the existing labor force to complete a retrofit ordinance.

Approval Authority: Honolulu Fire Department (HFD) and City Council

Benefits: Owner and Contractor

2. **Incentive: Real property tax credit/exemption - time limit.** This one-time or multiple-year credit/exemption would require proof of the completed sprinkler installation. The BFS would determine the amount of the credit/exemption. The credit would be deducted from the property tax; an exemption would be an upfront dollar amount.

Approval Authority: BFS

Benefits: Owner

3. **Incentive: Property lien to pay upon sale/transfer.** A funding source (i.e. general obligation bond) would be used to fund the cost of the sprinkler installation for qualified persons. A lien that would be paid when the property is sold or transferred would be placed on the property. A process to have this lien paid as first priority would have to be established.

Approval Authority: BFS

Benefits: Owner

4. **Incentive: Fire insurance savings.** Determining a percentage of increase or decrease in fire insurance premium amounts was not established. By applying a loss cost estimate, three representative residential high-rise buildings had an average decrease of 12.9% in future costs of claims for the building structure and a 31.9% average increase for the building contents.

Approval Authority: Industry

Benefits: Owner

5. **Incentive: Water meter fee reduction.** The Board of Water Supply (BWS) indicated that in most cases, a dedicated water meter is required for sprinkler systems. Of the approximately 300 nonsprinklered buildings that the BWS reviewed, approximately 250 would need some type of fire service system (i.e., new meters). The BWS charges for the cost of the meter, but not for any water used for fire protection purposes. Costs vary depending on the meter size that is required. The current one-time charge is \$21,000 for an 8-inch meter, \$12,100 for a 6-inch meter, and \$5,600 for an 4-inch meter.

Approval Authority: BWS

Benefits: Contractor and Owner

6. **Incentive: Building permit fee reduction.** Paying a building permit fee and for the permit processing would add to costs for retrofitting with sprinklers. For example, the permit fee for a \$1 million project would be \$7,415. Any permit fee reduction would require City Council approval. The DPP has enforcement powers with respect to compliance issues such as mandatory retrofitting. Lessees and lessors must both be responsible for compliance. Civil fines for noncompliance are possible.

Approval Authority: City Council

Benefits: Owner and Contractor

7. **Incentive: State tax credit.** H.B. 1448, H.D.2 (Attachment E) proposed a \$1,000-per-year-for-five-years credit for the installation of sprinkler systems for owners of apartments built before 1975 or in single-family dwellings. The proposal passed the House but died in the Senate. The State was not in a financial position to give such a credit. Much more support will be required to pass such a proposal.

Approval Authority: State Legislature

Benefits: Owner

8. **Incentive: Federal tax accelerated depreciation.** H.R. 1131 (Attachment F) and S512 propose to amend the Internal Revenue Code to classify fire sprinkler systems as a five-year property for depreciation purposes. The current depreciation rate is 27.5 years for residential rental property and 39 years for business property. The proposal would increase the rate of return on the sprinkler installation cost for high-rise buildings, residential occupancies up to and including four stories, and in one- and two-family dwellings. Support through Federal senators and representatives would be necessary.

Approval Authority: U. S. Congress

Benefits: Owner

9. **Incentive: City-Sponsored low interest loans.** Many apartment and condominium residents are owner/occupants on fixed incomes. Low interest loans will be needed to assist these owner/occupants.

Approval Authority: City Council

Benefits: Owner

May 31, 2005

10. **Incentive: Remove the wet standpipe system (WSS).** All high-rise residential buildings without sprinkler systems have a WSS. These include hose cabinets in common areas and are an available water supply for fire fighting by occupants or fire fighters. The hoses require an annual maintenance check and the WSS requires a five-year maintenance test. Upon approval from the DPP, the WSS may be removed (thus eliminating maintenance costs) after the installation of a sprinkler system.

Approval Authority: DPP

Benefits: Owner


11. **Incentive: Eliminate elevator upgrade.** The installation of a sprinkler system may require upgrading the existing elevators. Exceptions to the upgrade may be allowed if National Fire Protection Association 13 Standard criteria are met.


Approval Authority: DPP


Benefits: Contractor and Owner

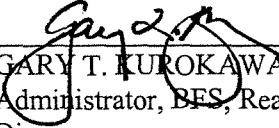
We hope the above information will be of assistance to you in determining whether an ordinance to retrofit residential high-rise buildings with automatic fire sprinklers should be introduced. Should you have any questions or wish to discuss this further, please call Chair Rogers at 831-7778.

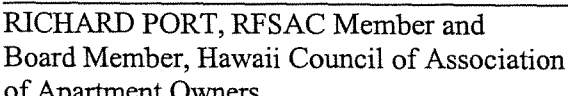

LLOYD D. ROGERS, RFSAC Chair and
Battalion Chief, HFD


SAM DANNAWAY, RFSAC Member and
President, S. S. Dannaway Associates, Inc.


ROBERT FERNANDEZ, RFSAC Member and
Member, Hawaii Building Trades Council


TIMOTHY HIU, RFSAC Member and
Acting Building Division Chief, DPP


GARY T. KUROKAWA, RFSAC Member and
Administrator, BES, Real Property Assessment
Division


RICHARD PORT, RFSAC Member and
Board Member, Hawaii Council of Association
of Apartment Owners

10. **Incentive: Remove the wet standpipe system (WSS).** All high-rise residential buildings without sprinkler systems have a WSS. These include hose cabinets in common areas and are an available water supply for fire fighting by occupants or fire fighters. The hoses require an annual maintenance check and the WSS requires a five-year maintenance test. Upon approval from the DPP, the WSS may be removed (thus eliminating maintenance costs) after the installation of a sprinkler system.

Approval Authority: DPP

Benefits: Owner

11. **Incentive: Eliminate elevator upgrade.** The installation of a sprinkler system may require upgrading the existing elevators. Exceptions to the upgrade may be allowed if National Fire Protection Association 13 Standard criteria are met.

Approval Authority: DPP

Benefits: Contractor and Owner

We hope the above information will be of assistance to you in determining whether an ordinance to retrofit residential high-rise buildings with automatic fire sprinklers should be introduced. Should you have any questions or wish to discuss this further, please call Chair Rogers at 831-7778.

LLOYD D. ROGERS, RFSAC Chair and
Battalion Chief, HFD

SAM DANNAWAY, RFSAC Member and
President, S. S. Dannaway Associates, Inc.

ROBERT FERNANDEZ, RFSAC Member and
Member, Hawaii Building Trades Council

TIMOTHY HIU, RFSAC Member and
Acting Building Division Chief, DPP

GARY T. KUOKAWA, RFSAC Member and
Administrator, BFS, Real Property Assessment
Division

*Richard Port with reservations
regarding item 1.*
RICHARD PORT, RFSAC Member and
Board Member, Hawaii Council of Association
of Apartment Owners

The Honorable Donovan M. Dela Cruz, Chair
and Members of the City Council

Page 6

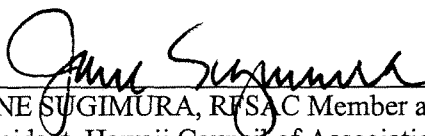
May 31, 2005



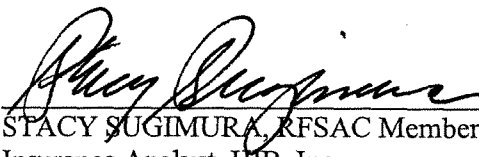
KEITH SHIDA, RFSAC Member and
Principal Executive, Customer Care Division,
BWS



KENNETH G. SILVA, RFSAC Member and
Assistant Chief, HFD



JANE SUGIMURA, RFSAC Member and
President, Hawaii Council of Association of
Apartment Owners



STACY SUGIMURA, RFSAC Member and
Insurance Analyst, HIB, Inc.



MARK YEE, RFSAC Member and
Administrative Rules Specialist,
State Department of Taxation

LR:lt

Attachments

National Fire Incident Reporting System
City and County of Honolulu
Structure Fire Report
2000-2004

Fires	Total	% of Total Fires	Dollar Loss	% of Dollar Loss	Injuries	% of Total Injuries	Fatalities	% of Total Fatalities
2000-2004 structure fires	1,932	NA	\$57,235,859	NA	153	NA	21	NA
Single- family fires	837	43%	\$33,827,254	59%	85	56%	20	95%
Multifamily fires	456	24%	\$8,911,850	16%	30	20%	0	0
High-rise fires	67	3%	\$2,945,830	5%	5	3%	0	0
High-rises with sprinklers	21	1%	\$175,410	1%	0	0	0	0
High-rises without sprinklers	46	2%	\$2,770,420	5%	5	3%	0	0
Fires with sprinklers	310	17%	\$8,080,370	14%	17	11%	0	0
Fires without sprinklers	1,602	83%	\$49,155,489	86%	136	89%	21	100%

Addresses for Residential Properties with Non-Sprinkler Buildings**

TAX MAP KEY	ADDRESS NUMBER	ADDRESS SUFFIX	STREET NAME	DIRECTION
11058002	3030		ALA ILIMA	
11058009	5180		LIKINI ST	
11058010	3148		ALA ILIMA	
11058011	3160		ALA ILIMA	
11058011	909		ALA NANALA	
11058013	949		ALA NANALA	
11059026	955		ALA LILIKOI	
11059028	975		ALA LILIKOI	
11060008	3139		ALA ILIMA	
11060011	3161		ALA ILIMA	
11060012	3215		ALA ILIMA	
11061015	801		ALA NIOI PL	
11061015	805		ALA NIOI PL	
11061020	3020		ALA NAPUAA PL	
11061024	2977		ALA ILIMA	
11062001	1015		ALA NAPUNANI	
11062005	2889		ALA ILIMA	
11062007	2907		ALA ILIMA	
11062009	2929		ALA ILIMA	
11062018	2950		ALA ILIMA	
11062018	5358		LIKINI ST	
11062019	2920		ALA ILIMA	
11062019	2940		ALA ILIMA	
11062019	5368		LIKINI ST	
11062042	1031		ALA NAPUNANI	
11062049	1077		ALA NAPUNANI	
11062051	1099		ALA NAPUNANI	
11065001	1121		ALA NAPUNANI	
11065029	1128		ALA NAPUNANI	
13039001	1427		LINAPUNI ST	
13039001	1445		LINAPUNI ST	
13039001	1472		LINAPUNI ST	
13039001	1474		LINAPUNI ST	
13039001	1475		LINAPUNI ST	
13039001	1476		LINAPUNI ST	
13039001	1478		LINAPUNI ST	
13039001	1482		LINAPUNI ST	
13039001	1483		LINAPUNI ST	
13039001	1484		LINAPUNI ST	
13039001	1485		LINAPUNI ST	
13039001	1486		LINAPUNI ST	
13039001	1488		LINAPUNI ST	
13039001	1492		LINAPUNI ST	
13039001	1494		LINAPUNI ST	
13039001	1496		LINAPUNI ST	
13039001	1498		LINAPUNI ST	
13039001	1518		LINAPUNI ST	
13039001	1520		LINAPUNI ST	
13039001	1530		LINAPUNI ST	
13039001	1531		LINAPUNI ST	
13039001	1532		LINAPUNI ST	
13039001	1538		LINAPUNI ST	
13039001	1540		LINAPUNI ST	
13039001	1545		LINAPUNI ST	
13039001	1548		LINAPUNI ST	
13039001	1550		LINAPUNI ST	

** All addresses for each property are listed, which may include dwelling unit addresses.

Addresses for Residential Properties with Non-Sprinkler Buildings**

13039001	1552	LINAPUNI ST	
13039001	1554	LINAPUNI ST	
13039001	1556	LINAPUNI ST	
13039001	1558	LINAPUNI ST	
13039001	1562	LINAPUNI ST	
13039001	1564	LINAPUNI ST	
13039001	1566	LINAPUNI ST	
13039001	1568	LINAPUNI ST	
13039001	1570	LINAPUNI ST	
13039001	1572	LINAPUNI ST	
13039001	1574	LINAPUNI ST	
13039001	1576	LINAPUNI ST	
13039001	1578	LINAPUNI ST	
13039001	1580	LINAPUNI ST	
13039001	1582	LINAPUNI ST	
13039001	1584	LINAPUNI ST	
13039001	1586	LINAPUNI ST	
13039001	1588	LINAPUNI ST	
13039001	1590	LINAPUNI ST	
13039001	1592	LINAPUNI ST	
16018084	2001	AUPUNI ST	
17023008	1409	LILIHA ST	
17023008	1425	LILIHA ST	
17023036	1465	AALA ST	
17023039	1450	AALA ST	
17026006	1220	AALA ST	
21005004	1511	NUUANU AVE	
21005004	1515	NUUANU AVE	
21005004	1519	NUUANU AVE	
21021045	410	MAGELLAN AVE	
21037001	1308	ALAPAI ST	
21037001	1301	LUSITANA ST	
21037001	1307	LUSITANA ST	
21037001	1311	LUSITANA ST	
21038008	1512	ALAPAI ST	
21038008	625	IOLANI AVE	
21039002	1520	WARD AVE	
21039004	1516	WARD AVE	
21039012	1421	ALAPAI ST	
21039012	730	CAPTAIN COOK AVE	
21040001	824	KINAU ST	
21040014	757	KINALAU PL	
21040037	710	LUNALILO ST	
21041013	785	KINAU ST	
21041024	815	KINAU ST	
21041024	817	KINAU ST	
21041024	819	KINAU ST	
21041024	821	KINAU ST	
21041024	827	KINAU ST	
21041024	1220	WARD AVE	
21042001	818	KING ST	S
21044033	920	WARD AVE	
22005004	1022	PROSPECT ST	
22010022	2011	NUUANU AVE	
22010022	2019	NUUANU AVE	
22010022	2029	NUUANU AVE	
22010023	2033	NUUANU AVE	

** All addresses for each property are listed, which may include dwelling unit addresses.

Addresses for Residential Properties with Non-Sprinkler Buildings**

22010023	2033	A	NUUANU AVE	
22010023	2033	B	NUUANU AVE	
22010023	2033	C	NUUANU AVE	
22010023	2033	D	NUUANU AVE	
22010023	2033	E	NUUANU AVE	
22010023	2033	F	NUUANU AVE	
22010023	2033	G	NUUANU AVE	
22010023	2033	H	NUUANU AVE	
22010023	2033	I	NUUANU AVE	
22010023	2033	J	NUUANU AVE	
22010023	2033	K	NUUANU AVE	
22010023	2033	L	NUUANU AVE	
22010023	2033	M	NUUANU AVE	
22010023	2033	N	NUUANU AVE	
22010023	2039		NUUANU AVE	
22010023	2039	A	NUUANU AVE	
22010023	2039	B	NUUANU AVE	
22010023	2039	C	NUUANU AVE	
22010023	2039	D	NUUANU AVE	
22010023	2039	E	NUUANU AVE	
22020002	21		CRAIGSIDE PL	
22020002	38		JUDD ST	S
22020002	2101		NUUANU AVE	
22020002	2103		NUUANU AVE	
23006001	1350		ALA MOANA	
23017013	1560		KANUNU ST	
23017013	1578		KANUNU ST	
23018008	934		KEEAUMOKU ST	
23018008	933		SHERIDAN ST	
23018029	910		AHANA ST	
23019004	1541		KALAKAUA AVE	
23019004	1545		KALAKAUA AVE	
23019004	1551		KALAKAUA AVE	
23019004	1583		KALAKAUA AVE	
23019061	1650		KANUNU ST	
23019065	1624		KANUNU ST	
23019067	1610		KANUNU ST	
23021011	731		AMANA ST	
23021015	738		KAHEKA ST	
23021015	750		KAHEKA ST	
23021020	781		AMANA ST	
23021020	1561		KANUNU ST	
23021025	747		AMANA ST	
23021028	750		AMANA ST	
23021032	780		AMANA ST	
23022052	1655		MAKALOA ST	
23023003	1682		KALAKAUA AVE	
23023005	1670		KALAKAUA AVE	
23034004	620		MCCULLY ST	
23034004	623		PUMEHANA ST	
23036001	419		ATKINSON DR	
23036038	419	A	ATKINSON DR	
23036039	1600		ALA MOANA	
23036039	1650		ALA MOANA	
23036039	359		ATKINSON DR	
23041011	1617		KAPIOLANI BLVD	
23041011	1620		KONA ST	

** All addresses for each property are listed, which may include dwelling unit addresses.

Addresses for Residential Properties with Non-Sprinkler Buildings**

24003003	1150		KING ST	S
24003003	1125		YOUNG ST	
24007002	1212		PUNAHOU ST	
24008003	1434		PUNAHOU ST	
24009008	1323		MAKIKI ST	
24009008	1403		MAKIKI ST	
24011039	1212		KINAU ST	
24012010	1134		KINAU ST	
24012010	1134	A	KINAU ST	
24012010	1134	B	KINAU ST	
24012010	1134	C	KINAU ST	
24012010	1134	D	KINAU ST	
24012011	1122		KINAU ST	
24012012	1112		KINAU ST	
24013032	1048		KINAU ST	
24013032	1048	A	KINAU ST	
24013032	1048	B	KINAU ST	
24013032	1048	C	KINAU ST	
24013032	1048	D	KINAU ST	
24013032	1050		KINAU ST	
24013032	1050	A	KINAU ST	
24013032	1050	B	KINAU ST	
24013032	1050	C	KINAU ST	
24013032	1050	D	KINAU ST	
24013032	1050	F	KINAU ST	
24013032	1054		KINAU ST	
24013032	1054	A	KINAU ST	
24013033	1040		KINAU ST	
24013033	1040	A	KINAU ST	
24013033	1040	B	KINAU ST	
24013033	1040	C	KINAU ST	
24013033	1040	D	KINAU ST	
24014004	930		LUNALILO ST	
24014004	1420		VICTORIA ST	
24014012	913		GREEN ST	
24014012	913	A	GREEN ST	
24014012	913	B	GREEN ST	
24014012	915		GREEN ST	
24014012	915	A	GREEN ST	
24014012	915	B	GREEN ST	
24014012	1425		WARD AVE	
24014052	924		KINAU ST	
24014052	1314		VICTORIA ST	
24014052	1314	B	VICTORIA ST	
24015004	1441		VICTORIA ST	
24015005	1456		THURSTON AVE	
24015017	915		PROSPECT ST	
24015017	927		PROSPECT ST	
24015021	902		SPENCER ST	
24015021	910		SPENCER ST	
24015021	912		SPENCER ST	
24015021	914		SPENCER ST	
24015021	916		SPENCER ST	
24015021	918		SPENCER ST	
24015021	920		SPENCER ST	
24015021	1515		WARD AVE	
24015021	1523		WARD AVE	

** All addresses for each property are listed, which may include dwelling unit addresses.

Addresses for Residential Properties with Non-Sprinkler Buildings**

24015021	1523	A	WARD AVE	
24016004	1069		SPENCER ST	
24016005	1560		THURSTON AVE	
24016014	1025		WILDER AVE	
24016023	1031		MAUNAIHI PL	
24016023	1039		MAUNAIHI PL	
24016043	1011		PROSPECT ST	
24016043	1013		PROSPECT ST	
24016045	1050		MAUNAIHI PL	
24016045	999		WILDER AVE	
24016046	1001		WILDER AVE	
24017002	1098		LUNALILO ST	
24017002	1400		PENSACOLA ST	
24017005	1018		LUNALILO ST	
24017005	1020		LUNALILO ST	
24017005	1020	A	LUNALILO ST	
24017006	1020		GREEN ST	
24017056	1415		VICTORIA ST	
24019010	1535		PENSACOLA ST	
24019015	1111		WILDER AVE	
24019017	1121		WILDER AVE	
24019034	1155		HASSINGER ST	
24021039	1447		KEWALO ST	
24021039	1447	A	KEWALO ST	
24021039	1447	B	KEWALO ST	
24021039	1447	C	KEWALO ST	
24021039	1451		KEWALO ST	
24021039	1451	A	KEWALO ST	
24021039	1451	B	KEWALO ST	
24021039	1451	C	KEWALO ST	
24021054	1569		KEWALO ST	
24021054	1569	A	KEWALO ST	
24021054	1309		WILDER AVE	
24021057	1323		WILDER AVE	
24023005	1805		POKI ST	
24023005	1815		POKI ST	
24023013	1710		PUNAHOU ST	
24023014	1537	A	NEHOA ST	
24023014	1541		NEHOA ST	
24023014	1545		NEHOA ST	
24023014	1836		POKI ST	
24023026	1541		DOMINIS ST	
24023033	1550		WILDER AVE	
24024014	1700		MAKIKI ST	
24024014	1710		MAKIKI ST	
24024022	1604		MAKIKI ST	
24024022	1634		MAKIKI ST	
24024029	1617		KEEAUMOKU ST	
24024029	1627		KEEAUMOKU ST	
24024029	1627	A	KEEAUMOKU ST	
24024029	1438		WILDER AVE	
24024029	1438	B	WILDER AVE	
24025021	1628		KEEAUMOKU ST	
24025021	1628	A	KEEAUMOKU ST	
24025022	1620		KEEAUMOKU ST	
24025039	1333		HEULU ST	
24025067	1716		KEEAUMOKU ST	

** All addresses for each property are listed, which may include dwelling unit addresses.

Addresses for Residential Properties with Non-Sprinkler Buildings**

24025067	1718		KEEAUMOKU ST	
24025067	1718	A	KEEAUMOKU ST	
24025073	1310		HEULU ST	
24028001	1246		HEULU ST	
24028001	1248		HEULU ST	
24028001	1250		HEULU ST	
24028001	1702		KEWALO ST	
24029023	1630		LIHOLIHO ST	
24029026	1616		LIHOLIHO ST	
24030051	1130		WILDER AVE	
24030058	1650		PIIKOI ST	
24030075	1683		PENSACOLA ST	
24030075	1683	A	PENSACOLA ST	
24030075	1683	B	PENSACOLA ST	
24030075	1687		PENSACOLA ST	
24030075	1687	A	PENSACOLA ST	
24031002	1010		WILDER AVE	
26002014	2211		HELUMOA RD	
26002014	2215		HELUMOA RD	
26002014	2210		KALIA RD	
26002014	205		LEWERS ST	
26003013	247		BEACH WLK	
26003014	253		BEACH WLK	
26003014	255		BEACH WLK	
26003035	2164		KALIA RD	
26003035	203		SARATOGA RD	
26004012	2161		KALIA RD	
26007006	1915		KALAKAUA AVE	
26007006	1917		KALAKAUA AVE	
26007006	1919		KALAKAUA AVE	
26007006	1921		KALAKAUA AVE	
26007006	1923		KALAKAUA AVE	
26007006	1925		KALAKAUA AVE	
26008002	246		PAOA PL	
26008002	252		PAOA PL	
26009001	2003		KALIA RD	
26010002	1765		ALA MOANA	
26010007	1777		ALA MOANA	
26011015	1720		ALA MOANA	
26011015	1720	A	ALA MOANA	
26011015	1720	B	ALA MOANA	
26011020	1696		ALA MOANA	
26011021	1690		ALA MOANA	
26011022	1684		ALA MOANA	
26011023	1660		ALA MOANA	
26011023	1676		ALA MOANA	
26011023	1521		ALA WAI BLVD	
26012001	425		ENA RD	
26012001	435		ENA RD	
26012002	1860		ALA MOANA	
26012002	405		ENA RD	
26012007	1804		ALA MOANA	
26012065	425		ENA RD	
26012065	435		ENA RD	
26013002	469		ENA RD	
26013002	456		HOBRO LN	
26013013	1717		ALA WAI BLVD	

** All addresses for each property are listed, which may include dwelling unit addresses.

Addresses for Residential Properties with Non-Sprinkler Buildings**

26013014	1715		ALA WAI BLVD	
26013014	1715	A	ALA WAI BLVD	
26013014	400		HOBRO LN	
26013014	444		HOBRO LN	
26013018	1645		ALA WAI BLVD	
26014026	1909		ALA WAI BLVD	
26014026	215		MCCULLY ST	
26014026	231		MCCULLY ST	
26015001	2028		KUHIO AVE	
26015001	2030		KUHIO AVE	
26015001	2032		KUHIO AVE	
26015001	2034		KUHIO AVE	
26015001	2036		KUHIO AVE	
26015001	2040		KUHIO AVE	
26015001	2042		KUHIO AVE	
26015001	2044		KUHIO AVE	
26015001	2046		KUHIO AVE	
26015001	2048		KUHIO AVE	
26015001	422		NAMAHANA ST	
26015002	411		KUAMOO ST	
26015009	2029		ALA WAI BLVD	
26015012	454		NAMAHANA ST	
26015026	419		KEONIANA ST	
26015026	425		KEONIANA ST	
26015030	439		KEONIANA ST	
26015030	445		KEONIANA ST	
26015035	2015		ALA WAI BLVD	
26016001	2085		ALA WAI BLVD	
26016001	2089		ALA WAI BLVD	
26016001	452		KALAIMOKU ST	
26016001	451		OLOHANA ST	
26016001	453		OLOHANA ST	
26016001	455		OLOHANA ST	
26017004	445		KAIOLU ST	
26017016	2115		ALA WAI BLVD	
26017031	440		LEWERS ST	
26017051	2170		KUHIO AVE	
26017053	411		KAIOLU ST	
26017057	2140		KUHIO AVE	
26017060	430		KAIOLU ST	
26018007	320		LEWERS ST	
26018007	328		LEWERS ST	
26018083	334		LEWERS ST	
26018083	336		LEWERS ST	
26019001	364		SEASIDE AVE	
26019009	342		SEASIDE AVE	
26019021	2211		KUHIO AVE	
26019021	358		ROYAL HAWAIIAN AVE	
26020040	2222		ALOHA DR	
26020053	2233		ALA WAI BLVD	
26020069	441		LEWERS ST	
26021011	2375		ALA WAI BLVD	
26021016	444		KANEKAPOLEI ST	
26021018	441		WALINA ST	
26021020	431		NAHUA ST	
26021020	432		WALINA ST	
26021020	436		WALINA ST	

** All addresses for each property are listed, which may include dwelling unit addresses.

Addresses for Residential Properties with Non-Sprinkler Buildings**

26021021	2345		ALA WAI BLVD
26021021	440		WALINA ST
26021025	436		NOHONANI ST
26021025	429		SEASIDE AVE
26021025	435		SEASIDE AVE
26021045	455		NAHUA ST
26021050	435		WALINA ST
26021068	437		NOHONANI ST
26021068	437	A	NOHONANI ST
26021068	437	B	NOHONANI ST
26021068	445		NOHONANI ST
26021068	447		NOHONANI ST
26021084	2281		ALA WAI BLVD
26021084	2283		ALA WAI BLVD
26021084	2283	A	ALA WAI BLVD
26021107	411		NAHUA ST
26021107	415		NAHUA ST
26021107	417		NAHUA ST
26021107	419		NAHUA ST
26021107	421		NAHUA ST
26021107	423		NAHUA ST
26021107	425		NAHUA ST
26021107	427		NAHUA ST
26021110	2355		ALA WAI BLVD
26023018	2450		KOA AVE
26023039	2424		KOA AVE
26023045	2463		KUHIO AVE
26023045	2450		PRINCE EDWARD ST
26023050	2449		KUHIO AVE
26023050	2463		KUHIO AVE
26023067	2415		KUHIO AVE
26023067	2419		KUHIO AVE
26023067	2425		KUHIO AVE
26023072	2465		KUHIO AVE
26023072	2460		PRINCE EDWARD ST
26023072	2462		PRINCE EDWARD ST
26023072	2464		PRINCE EDWARD ST
26024010	222		LILIUOKALANI AVE
26024014	2442		KUHIO AVE
26024024	2440		KUHIO AVE
26024032	236		LILIUOKALANI AVE
26024073	2421		ALA WAI BLVD
26024073	2418		TUSITALA ST
26024073	2422		TUSITALA ST
26024074	2415		ALA WAI BLVD
26024085	2465		ALA WAI BLVD
26024097	225		KAIULANI AVE
26025001	2533		ALA WAI BLVD
26025015	277		OHUA AVE
26025015	311		OHUA AVE
26025017	320		OHUA AVE
26025021	250		OHUA AVE
26025032	225		LILIUOKALANI AVE
26025040	2509		ALA WAI BLVD
26025048	303		LILIUOKALANI AVE
26025060	2547		ALA WAI BLVD
26025060	330		IPOAKALANI AVE

** All addresses for each property are listed, which may include dwelling unit addresses.

Addresses for Residential Properties with Non-Sprinkler Buildings**

26026014	2500		KALAKAUA AVE	
26026014	103		KEALOHILANI AVE	
26026014	107		KEALOHILANI AVE	
26027002	204		MAKEE RD	
26027003	2575		KUHIO AVE	
26027026	155		PAOAKALANI AVE	
26027028	2555		CARTWRIGHT RD	
26027032	134		KAPAHULU AVE	
26027037	129		PAOAKALANI AVE	
26028019	240		MAKEE RD	
26028035	320		AINAKEA WAY	
26028035	320	A	AINAKEA WAY	
26028035	320	B	AINAKEA WAY	
26028037	2609		ALA WAI BLVD	
27002014	2027		DATE ST	
27002014	2033		DATE ST	
27002014	778		WILIWILI ST	
27002014	778	A	WILIWILI ST	
27002014	778	B	WILIWILI ST	
27002014	778	C	WILIWILI ST	
27004001	2333		KAPIOLANI BLVD	
27006007	796		ISENBERG ST	
27006022	2205		DATE ST	
27006022	2211		DATE ST	
27006022	777		PAANI ST HNL	
27013002	500		UNIVERSITY AVE	
27013008	555		UNIVERSITY AVE	
27013011	509		UNIVERSITY AVE	
27013023	2444		HIHIWAI ST	
27015004	2440		DATE ST	
27016019	845		UNIVERSITY AVE	
27017020	2637		KUILEI ST	
27017020	2651		KUILEI ST	
27017039	2648		KUILEI ST	
27019015	2525		DATE ST	
27027023	2825		KING ST	S
27027025	1941		CHURCH LN	
27031017	910		KAPAHULU AVE	
27035015	754		EKELA AVE	
28001037	1650		YOUNG ST	
28001042	1617		BERETANIA ST	S
28001042	1616		YOUNG ST	
28010024	1215		ALEXANDER ST	
28011006	1320		ALEXANDER ST	
28012014	1414		ALEXANDER ST	
28012014	1414	A	ALEXANDER ST	
28012014	1414	B	ALEXANDER ST	
28012014	1414	C	ALEXANDER ST	
28012014	1414	D	ALEXANDER ST	
28012022	1609		CLARK ST HNL	
28012022	1411		PUNAHOU ST	
28012022	1415		PUNAHOU ST	
28012025	1617		CLARK ST HNL	
28012025	1625		CLARK ST HNL	
28012036	1621		DOLE ST	
28012043	1635		DOLE ST	
28012043	1639		DOLE ST	

** All addresses for each property are listed, which may include dwelling unit addresses.

Addresses for Residential Properties with Non-Sprinkler Buildings**

28012043	1639	A	DOLE ST
28012049	1521		PUNAHOU ST
28012050	1529		PUNAHOU ST
28012050	1615		WILDER AVE
28012051	1535		PUNAHOU ST
28012061	1629		WILDER AVE
28023003	2444		DOLE ST
28023003	2530		DOLE ST
28023003	2540		DOLE ST
28023003	2560		DOLE ST
28029001	2421		DOLE ST
28029001	2444		DOLE ST
28029001	2485		DOLE ST
28029001	2525		DOLE ST
28029001	2555		DOLE ST
28029001	2563		DOLE ST
28029001	2569		DOLE ST
28029001	2571		DOLE ST
28029001	2575		DOLE ST
28029001	2579		DOLE ST
28029001	2583		DOLE ST
28029001	2585		DOLE ST
28029001	2591		DOLE ST
28029001	2645		DOLE ST
31032001	2997		KALAKAUA AVE
31032001	2999		KALAKAUA AVE
31032003	2979		KALAKAUA AVE
31032004	2969		KALAKAUA AVE
31032007	2873	C	KALAKAUA AVE
31032007	2875		KALAKAUA AVE
31032007	2877		KALAKAUA AVE
31032009	2893		KALAKAUA AVE
31032010	2895		KALAKAUA AVE
31032016	2885		KALAKAUA AVE
31032030	2943		KALAKAUA AVE
31033001	2801		COCONUT AVE
31033001	2809		COCONUT AVE
31033009	3019		KALAKAUA AVE
31033010	3015		KALAKAUA AVE
31033011	3003		KALAKAUA AVE
31033015	3056		KALAKAUA AVE
31033015	3051		KIELE AVE
31033059	3065		KALAKAUA AVE
32005023	1139		9TH AVE
33005008	3350		SIERRA DR
35016016	4340		PAHOA AVE
35017004	4300		WAIALAE AVE
39008009	500		LUNALILO HOME RD
39035013	250		KAWAIHAE ST
39070001	6770		HAWAII KAI DR
39070002	6750		HAWAII KAI DR
39070003	6710		HAWAII KAI DR
43054013	14		AULIKE ST
45033003	090		NAMOKU ST
45039001	535		LULUKU RD
53008002	567		KAM HWY
73012014	1750		WILIKINA DR

** All addresses for each property are listed, which may include dwelling unit addresses.

Addresses for Residential Properties with Non-Sprinkler Buildings**

73012014	1830		WILIKINA DR	
74007001	1060		KILANI AVE	
74007001	221		KOA ST	
74007001	225		KOA ST	
74007001	229		KOA ST	
84002010	680		KILI DR	
84002010	710		KILI DR	
84002010	740		KILI DR	
84002010	770		KILI DR	
84004014	965		FARRINGTON HWY	
84004014	975		FARRINGTON HWY	
84004014	1005		LAHILAHI ST	
94039048	337		PUPUMOMI ST	
94039083	357		FARRINGTON HWY	
94039083	361		FARRINGTON HWY	
94039083	371		FARRINGTON HWY	
94039083	334		PUPUMOMI ST	
94039083	336		PUPUMOMI ST	
94039083	338		PUPUMOMI ST	
94039083	340		PUPUMOMI ST	
94039083	344		PUPUMOMI ST	
94039083	346		PUPUMOMI ST	
95012017	014		WAIHONU ST	
95012017	020		WAIHONU ST	
95012017	045		WAIKALANI DR	
95012017	055		WAIKALANI DR	
95012017	061		WAIKALANI DR	
95012017	065		WAIKALANI DR	
95012030	2027		WAIKALANI PL	
95012030	2027	A	WAIKALANI PL	
95012030	2027	B	WAIKALANI PL	
95012030	2027	C	WAIKALANI PL	
95012030	2027	D	WAIKALANI PL	
95012030	2031		WAIKALANI PL	
95012030	2031	A	WAIKALANI PL	
95012030	2031	B	WAIKALANI PL	
95012030	2031	C	WAIKALANI PL	
95012030	2031	D	WAIKALANI PL	
95012030	2031	E	WAIKALANI PL	
95012030	2031	F	WAIKALANI PL	
95012030	2035		WAIKALANI PL	
95012030	2035	A	WAIKALANI PL	
95012030	2035	B	WAIKALANI PL	
95012030	2035	C	WAIKALANI PL	
95012030	2035	D	WAIKALANI PL	
95012030	2035	E	WAIKALANI PL	
95012030	2035	F	WAIKALANI PL	
95012030	2035	G	WAIKALANI PL	
95012030	2039		WAIKALANI PL	
95012030	2039	A	WAIKALANI PL	
95012030	2039	B	WAIKALANI PL	
95012030	2039	C	WAIKALANI PL	
95012030	2039	D	WAIKALANI PL	
95012030	2039	E	WAIKALANI PL	
95012030	2039	F	WAIKALANI PL	
95012030	2039	G	WAIKALANI PL	
97021020	913		4TH ST PC	

** All addresses for each property are listed, which may include dwelling unit addresses.

Addresses for Residential Properties with Non-Sprinkler Buildings**

97021020	950		LEHUA AVE	
98012054	450		KOAUKA LP	
98030053	500		KOAUKA LP	
99003026	009		KALALOA ST	
99040052	060		KAUHALE ST	
99040052	064		KAUHALE ST	
99040052	070		KAUHALE ST	
99064025	015		KALALOA ST	

** All addresses for each property are listed, which may include dwelling unit addresses.

Residential Properties with Non-Sprinkler Buildings*

Total # = 363

Tax Map Key	Number of Floors	Total Floor Area	Year Built
11058002	12	0	1973
11058009	17	0	1972
11058010	12	0	1973
11058011	20	0	1973
11058013	16	0	1972
11059026	8	0	1973
11059028	10	0	1974
11060008	9	0	1971
11060011	22	0	1972
11060012	13	0	1972
11060012	13	0	1972
11061015	13	0	1972
11061020	10	0	1969
11061024	8	0	1971
11062001	8	0	1971
11062005	15	0	1972
11062007	8	0	1969
11062009	15	0	1972
11062018	9	0	1971
11062019	16	0	1969
11062042	13	0	1969
11062049	8	0	1971
11062051	11	0	1974
11065001	19	0	1971
11065029	18	0	1972
13039001	16	0	1963
13039001	16	0	1963
16018084	9	0	1969
17023008	19	215730	1974
17023036	23	0	1971
17023039	22	0	1970
17026006	15	0	1967
17026006	15	0	1967
17026006	15	0	1967
21005004	12	0	1963
21005004	23	0	1963
21005004	23	0	1963
21021045	10	0	1968
21037001	8	0	1969
21038008	8	0	1962
21039002	14	0	1967
21039004	8	0	1972
21039012	8	0	1960
21040001	14	0	1974
21040014	17	0	1974
21040037	11	0	1974
21041013	9	0	1973
21041024	10	0	1973

* Buildings built before 1975 with 8 or more floors.

Residential Properties with Non-Sprinkler Buildings*

21042001	21	0	1970
21044033	18	0	1971
22005004	12	0	1968
22010022	16	0	1972
22010023	25	0	1970
22020002	9	0	1965
23006001	33	0	1969
23017013	17	0	1971
23018008	8	0	1968
23018029	12	0	1964
23019004	13	0	1967
23019004	16	0	1969
23019061	14	0	1965
23019065	13	0	1966
23019067	15	0	1965
23021011	16	0	1967
23021015	18	159500	1970
23021020	20	0	1970
23021025	22	292000	1968
23021028	21	0	1965
23021032	19	0	1967
23022052	27	0	1971
23023003	8	0	1971
23023005	10	0	1968
23034004	12	0	1964
23036001	19	0	1970
23036038	15	0	1959
23036039	40	0	1971
23041011	17	154300	1970
24003003	10	0	1967
24007002	35	0	1972
24008003	12	265181	1966
24009008	8	0	1971
24011039	21	0	1972
24012010	11	0	1973
24012011	10	0	1972
24012012	11	0	1972
24013032	12	0	1970
24013033	12	0	1973
24014004	17	0	1973
24014012	26	0	1968
24014052	19	0	1971
24015004	15	0	1968
24015005	14	0	1965
24015017	15	0	1971
24015021	16	0	1967
24016004	12	0	1967
24016005	12	0	1972
24016014	13	0	1965

* Buildings built before 1975 with 8 or more floors.

Residential Properties with Non-Sprinkler Buildings*

24016023	11	0	1969
24016043	11	0	1972
24016043	12	0	1971
24016045	17	0	1966
24016046	13	0	1963
24017002	17	0	1969
24017005	12	0	1970
24017006	8	0	1957
24017056	17	0	1960
24019010	11	112920	1969
24019015	20	0	1970
24019017	21	0	1969
24019034	8	0	1969
24021039	9	0	1970
24021054	14	0	1967
24021057	22	0	1970
24023005	12	0	1968
24023013	11	0	1971
24023014	12	0	1972
24023026	14	0	1973
24023033	13	0	1968
24024014	10	0	1957
24024022	11	0	1965
24024029	18	0	1965
24024029	18	0	1965
24025021	9	0	1973
24025022	9	0	1971
24025039	12	0	1972
24025067	8	0	1967
24025073	22	0	1970
24028001	13	0	1964
24029023	23	0	1971
24029026	15	0	1972
24030051	20	0	1970
24030058	9	0	1973
24030075	12	0	1973
24031002	17	0	1973
26002014	27	264286	1968
26003013	11	31156	1959
26003014	9	44731	1961
26003035	11	0	1968
26004012	15	0	1959
26007006	30	192000	1974
26008002	11	46640	1960
26009001	24	358400	1966
26010002	18	428186	1967
26010007	30	42044	1962
26011015	16	72300	1961
26011015	17	92361	1961

* Buildings built before 1975 with 8 or more floors.

Residential Properties with Non-Sprinkler Buildings*

26011020	10	0	1960
26011021	16	0	1970
26011022	16	0	1968
26011023	16	0	1966
26012001	14	0	1959
26012002	23	437083	1968
26012007	19	0	1969
26012065	13	62400	1958
26012066	14	0	1959
26013002	38	0	1971
26013013	30	0	1969
26013014	37	324000	1974
26013018	15	0	1966
26014026	16	7410	1969
26015001	19	108100	1967
26015002	8	56960	1967
26015009	10	0	1970
26015012	8	0	1966
26015026	14	0	1970
26015030	14	0	1970
26015035	11	0	1961
26016001	19	0	1967
26017004	12	0	1954
26017016	15	0	1971
26017028	11	2500	1964
26017031	15	0	1970
26017051	9	0	1959
26017053	8	0	1959
26017057	25	0	1973
26017060	12	0	1961
26018007	8	40480	1960
26018083	11	31000	1967
26019001	23	4022	1967
26019009	14	71900	1969
26019021	9	0	1960
26020040	10	0	1969
26020053	19	0	1969
26020069	10	0	1969
26021011	14	2700	1970
26021016	15	3400	1966
26021018	10	42350	1969
26021020	17	0	1967
26021021	28	0	1974
26021025	15	0	1961
26021045	10	0	1969
26021050	12	0	1971
26021068	16	102650	1967
26021084	10	0	1962
26021107	10	75000	1959

* Buildings built before 1975 with 8 or more floors.

Residential Properties with Non-Sprinkler Buildings*

26021110	10	0	1960
26023018	10	22940	1960
26023039	8	49196	1964
26023045	12	8119	1974
26023050	12	12101	1968
26023067	13	0	1968
26023072	15	1450	1970
26024010	13	0	1968
26024014	12	0	1966
26024024	23	0	1974
26024032	9	15372	1966
26024073	20	0	1970
26024074	20	0	1966
26024085	14	0	1968
26024097	16	0	1965
26025001	15	0	1970
26025015	16	0	1974
26025017	14	0	1970
26025021	15	0	1970
26025032	10	0	1960
26025040	10	0	1973
26025048	12	0	1968
26025060	10	0	1967
26026014	27	174557	1960
26027002	14	0	1967
26027003	19	0	1970
26027026	12	0	1967
26027028	8	0	1971
26027032	10	6541	1962
26027037	9	0	1964
26028001	24	0	1974
26028019	14	0	1967
26028035	8	0	1964
26028037	11	0	1968
27002014	8	0	1971
27004001	36	642985	1970
27006007	19	0	1973
27006022	9	0	1966
27013002	17	0	1969
27013002	25	0	1969
27013008	38	0	1971
27013011	10	0	1960
27013023	24	0	1974
27015004	13	0	1966
27016019	11	0	1972
27017020	12	0	1970
27017039	12	0	1970
27019015	42	0	1973
27027023	37	0	1971

* Buildings built before 1975 with 8 or more floors.

Residential Properties with Non-Sprinkler Buildings*

27027025	8	0	1971
27028020	10	0	1970
27031017	8	0	1970
27035015	9	0	1972
28001037	9	0	1973
28001042	12	0	1964
28010024	13	0	1974
28011006	14	0	1970
28012014	11	0	1974
28012022	10	0	1973
28012025	9	0	1974
28012036	13	0	1973
28012043	14	0	1971
28012049	16	0	1969
28012050	8	0	1967
28012051	9	0	1965
28012061	12	0	1966
28023003	13	0	1962
28029001	10	0	1962
28029001	13	0	1971
28029001	13	0	1971
28029001	13	0	1972
28029001	13	0	1972
31032001	9	0	1957
31032003	11	0	1960
31032004	13	0	1959
31032007	16	0	1960
31032009	8	0	1969
31032010	21	175627	1959
31032016	13	57430	1967
31032030	12	0	1957
31033001	8	0	1959
31033009	13	0	1960
31033010	10	0	1965
31033011	12	0	1960
31033015	9	0	1967
31033059	11	0	1959
32005023	16	88000	1965
33005008	9	0	1965
35016016	24	0	1969
35017004	27	0	1966
35017004	14	0	1966
39008009	9	0	1973
39008009	9	0	1973
39035013	24	0	1973
39070001	14	0	1974
39070002	15	0	1974
39070003	18	0	1974
43054013	11	0	1966

* Buildings built before 1975 with 8 or more floors.

Residential Properties with Non-Sprinkler Buildings*

45033003	14	208011	1962
45039001	9	0	1966
53008002	9	0	1974
73012014	10	0	1971
74007001	8	0	1972
84002010	17	0	1969
84002010	17	0	1969
84004014	9	0	1966
94039048	8	0	1970
94039083	9	0	1971
95012017	10	0	1972
95012017	11	0	1972
95012030	10	0	1973
97021020	9	0	1974
98012054	19	0	1974
98030053	22	0	1974
99003026	14	0	1971
99040052	10	0	1970
99064025	9	0	1974

* Buildings built before 1975 with 8 or more floors.

COST ANALYSIS
High-Rise Fire Safety Task Force

DATE: 31-Mar-05

	Marco Polo 2333 Kapiolani Blvd.	1001 Wilder Avenue	Pearl One 98-500 Koauka Loop	Royal Court 920 Ward Avenue
Type of Building	Residential Condo	Residential Condo	Residential Condo	Residential Condo
Cost for sprinkler protection of dwelling	\$1,912,500	\$373,500	\$1,984,500	\$915,000
Cost of sprinkler system for common areas	\$162,750	\$124,500	\$205,500	\$315,000
Cost of fire pump system (electric motor drive)	\$75,000	\$78,000	\$55,500	\$55,500
Cost of BWS DC meter and connections	\$30,000	\$0	\$25,500	\$25,500
Cost for engine generator for emergency power	\$75,000	\$75,000	\$75,000	\$75,000
Cost for asbestos remediation	\$207,525	\$49,800	\$219,000	\$123,000
Total cost of fire sprinkler system	\$2,462,775	\$700,800	\$2,565,000	\$1,509,000
Additional items				
Cost for upgrade of fire alarm system	\$432,344	\$103,750	\$456,250	\$256,250
Cost of fire pump system (diesel engine drive)	\$102,000	\$102,000	\$66,000	\$66,000
Squarefoot Costs				
Estimated Square Footage	642,985	75,315	625,985	233,701
Sprinkler System Cost/square foot	\$3.83	\$9.30	\$4.10	\$6.46
Fire Alarm System Cost/square foot	\$0.67	\$1.38	\$0.73	\$1.10
Cost Per Dwelling Unit				
Number of dwelling units	572	67	300	112
Sprinkler System Cost/dwelling unit	\$4,305.55	\$10,459.70	\$8,550.00	\$13,473.21
Fire Alarm System Cost/dwelling unit	\$755.85	\$1,548.51	\$1,520.83	\$2,287.95
Notes:	No sprinklers for parking garage included Converting a standpipe riserto combination system.	no need for additional BWS fire service connection. Converting a standpipe riserto combination system. exact floor area not availablefigure show is an estimate	No sprinklers for parking garage included	
Sprinkler Cost by: Other Cost by:	Grinnell Fire Protection SSD	Grinnell Fire Protection SSD	Pacific Fire Protection SSD	Pacific Fire Protection SSD

1. Fire sprinkler costs are based on Steel pipe system (schedule 40)

MEMORANDUM

March 31, 2005

To: Residential Fire Safety Advisory Committee

From: Stacy Sugimura
Government Relations/ Insurance Analyst
HAWAII INSURANCE BUREAU, INC.

RE: Loss Cost estimates for three condominiums and three retrofitted hotels

HAWAII INSURANCE BUREAU

The Hawaii Insurance Bureau, Inc. is an independent, non-profit corporation operating as a service and advisory organization governed by a Board of Directors elected from member insurance companies.

HIB serves nearly 300 property and casualty insurance companies and their subsidiaries located in Hawaii and on the continental United States. On behalf of these companies HIB prepares and files rules, forms and loss costs with the State of Hawaii Insurance Division. About fifteen years ago, HIB phased-out advisory gross rates and replaced them with advisory average prospective loss costs. We also perform field inspections, and statistical analysis.

For more than 125 years, the Hawaii Insurance Bureau, Inc. and its preceding organizations have served member and subscriber insurance companies.

LOSS COST

The advisory loss costs represents an actuarial estimation of the future cost of claims. The loss costs provides companies with cost estimates associated only with the claims that are expected to arise from future policies and the expenses for adjudicating claims. To the extent that a member company wishes to adopt and use the HIB loss cost in its own ratemaking process, it is up to each company individually to determine the additional charges that may be needed to cover its other expected operating expenses.

Included in premium rates, but not in loss costs, are the costs of wages, office rent, marketing, customer service, taxes, licenses, underwriting expenses, and profits.

ESTIMATES

The Hawaii Insurance Bureau, Inc. was asked by this advisory committee to provide the insurance premium for sprinklered buildings as well as the insurance premium without fire sprinklers. As explained above, HIB **does not** calculate insurance premiums, but

instead **calculates loss cost**. For this reason, we have provided loss cost estimates for three retrofitted hotels and three condos that are sprinklered.

We selected three condos. These condos varied in location, type of construction and sprinkler grade. In order to conduct this analysis, we selected three condos that have been sprinklered. We calculated the loss cost as a sprinklered building, then we removed the sprinkler credit and again calculated the loss cost for both building and contents.

Condo #1	Non-sprinklered	Automatic Sprinklered	Percentage Change
Building Structure Loss Costs	0.009	0.010	11%
Building Contents Loss Costs	0.024	0.015	-37.5%

Condo #2	Non-sprinklered	Automatic Sprinklered	Percentage Change
Building Structure Loss Costs	0.009	0.010	11.0%
Building Contents Loss Costs	0.024	0.016	-33.3%

Condo #3	Non-sprinklered	Automatic Sprinklered	Percentage Change
Building Structure Loss Costs	0.006	0.007	16.7%
Building Contents Loss Costs	0.016	0.012	-25.0%

The committee asked HIB to review three specific hotels which were retrofitted with sprinkler systems. We have removed the names of the hotels for their privacy.

Hotel #1	Non-sprinklered	Automatic Sprinklered	Percentage Change
Building Structure Loss Costs	0.022	0.013	-40.9%
Building Contents Loss Costs			
Gift Shop	0.065	0.029	-55.4%
Offices	0.061	0.03	-55.8%
Restaurant	0.094	0.038	-59.6%
Bar	0.094	0.033	-64.9%
Hotel	0.033	0.020	-65.0%

Hotel #2	Non-sprinklered	Automatic Sprinklered	Percentage Change
Building Structure Loss Costs	0.030	0.013	-56.7%
Building Contents Loss Costs			
Beauty Shop	0.069	0.027	-60.9%
Restaurant	0.107	0.039	-63.6%
Hotel	0.039	0.020	48.7%
General Mercantile	0.074	0.031	58.1%
Art Gallery	0.102	0.038	62.7%

Hotel #3	Non-sprinklered	Automatic Sprinklered	Percentage Change
Building Structure Loss Costs	0.018	0.013	-27.8%
Building Contents Loss Costs			
Sporting Goods Store	0.063	0.030	-52.4%
Bar	0.093	0.034	-63.4%
Restaurant	0.093	0.039	-58.1%
Beauty Shop	0.059	0.026	-55.9%
Hotel	0.032	0.020	-37.5%

We cannot emphasize enough that these are loss cost figures. Again, loss cost is the expected losses plus the expense of adjusting those claims. In short, it is a partial component of the final premium.

We would also like to point out the insured is eligible for full credit only if the sprinkler and hydraulic calculations are submitted to and reviewed by HIB. Otherwise, the insured will get partial sprinkler credit if their testing is up-to-date.

Report Title:

Income Tax Credit; Automatic Fire Sprinkler System

Description:

Provides an income tax credit for qualifying costs of automatic fire sprinkler systems installed and placed into service after June 30, 2006. (HB1448 HD2)

HOUSE OF REPRESENTATIVES

TWENTY-THIRD LEGISLATURE, 2005

STATE OF HAWAII

H.B. NO. 1448
H.D. 2

A BILL FOR AN ACT

relating to income tax credit.

**BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF
HAWAII:**

SECTION 1. The purpose of this Act is to establish a capped income tax credit for qualifying costs of automatic fire sprinkler systems installed and placed into service after June 30, 2006.

SECTION 2. Chapter 235, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated and to read as follows:

"§235- Automatic fire sprinkler system; income tax credit. (a) Each individual or corporate resident taxpayer who files an individual or corporate net income tax return for a taxable year may claim a tax credit under this section which shall be deductible from the taxpayer's Hawaii state individual or corporate income tax liability,

if any, for the taxable year in which the credit is properly claimed. The tax credit may be claimed for each automatic fire sprinkler system that is installed and placed into service by a taxpayer after June 30, 2006.

(b) The tax credit shall be equal to per cent of the qualifying costs of the automatic fire sprinkler system; provided that:

(1) The tax credit shall not exceed \$1,000 in each taxable year for each individual automatic fire sprinkler system;

(2) The credit may be claimed for each taxable year up to five consecutive taxable years; provided that the taxpayer shall not be allowed to claim the credit after the fifth taxable year; and

(3) The excess of credits over a taxpayer's individual or corporate income tax liability for any taxable year shall not be refunded to the taxpayer.

(c) For the purposes of this section:

"Automatic fire sprinkler system" means an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, a structure, or area, generally overhead and to which sprinklers are connected in a systematic pattern. The valve controlling each system riser is located in the system riser or its supply piping. Each sprinkler system riser includes a device for activating an alarm when the system is in operation. The device is normally activated by heat from a fire and discharges water over the fire area.

"Qualifying costs" means costs incurred in purchasing or otherwise acquiring an automatic fire sprinkler system, including accessories and installation, for use:

(1) In any apartment or condominium built before 1975 or in any other multi-residential dwelling; and

(2) In single-family residential dwellings.

(d) In the case of a partnership, S corporation, estate, or trust, the tax credit allowable is for actual cost incurred by the entity for the taxable year. The cost upon which the tax credit is computed shall be determined at the entity level. Distribution and share of credit shall be determined by rule.

(e) All claims, including any amended claims, for tax credits under this section shall be filed on or before the end of the twelfth month following the close of the taxable year for which the credit may be claimed. Failure to comply with the foregoing provision shall constitute a waiver of the rights to claim the credit.

(f) The director of taxation shall:

(1) Prepare any forms that may be necessary to claim a tax

credit under this section;

(2) Require the taxpayer to furnish reasonable information

to ascertain the validity of the claim for credit made

under this section; and

(3) Adopt rules necessary to effectuate the purposes of

this section pursuant to chapter 91."

SECTION 3. The department of taxation shall determine the estimated amount of tax credits that may be claimed and the estimated amount of state tax revenue that may be lost as a

result of the tax credit and shall report its findings to the legislature no later than twenty days prior to the convening of the regular session of 2006.

SECTION 4. New statutory material is underscored.

SECTION 5. This Act shall take effect upon its approval and shall apply to taxable years beginning after December 31, 2020.

109TH CONGRESS
1ST SESSION

H. R. 1131

To amend the Internal Revenue Code of 1986 to classify automatic fire sprinkler systems as 5-year property for purposes of depreciation.

IN THE HOUSE OF REPRESENTATIVES

MARCH 3, 2005

Mr. WELDON of Pennsylvania (for himself, Mr. BASS, Mr. CANTOR, Mr. CLAY, Mr. COSTELLO, Mr. ENGLISH of Pennsylvania, Mr. FITZPATRICK of Pennsylvania, Mr. GALLEGLY, Mr. HALL, Mr. HINCHEY, Mr. HOLDEN, Mr. HYDE, Mrs. JONES of Ohio, Mrs. MALONEY, Mr. MCHUGH, Mr. MCINTYRE, Mr. OWENS, Ms. PRYCE of Ohio, Mr. REHBERG, Mr. ROGERS of Michigan, Mr. SHIMKUS, Mr. SOUDER, Mr. UPTON, Mr. WILSON of South Carolina, Mr. ACKERMAN, Mr. CARNAHAN, Mr. EVANS, Mr. GILCHREST, Mr. GORDON, Mr. HOLT, Mr. INSLEE, Ms. JACKSON-LEE of Texas, Mr. KILDEE, Mr. LARSON of Connecticut, Mrs. LOWEY, Mr. RUSH, Mr. TOWNS, Mr. WEXLER, and Mr. KENNEDY of Rhode Island) introduced the following bill; which was referred to the Committee on Ways and Means

A BILL

To amend the Internal Revenue Code of 1986 to classify automatic fire sprinkler systems as 5-year property for purposes of depreciation.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Fire Sprinkler Incen-
5 tive Act of 2005”.

1 **SEC. 2. FINDINGS.**

2 The Congress finds that—

3 (1) since the publication of the original study
4 and comprehensive list of recommendations in Amer-
5 ica Burning, written in 1974, requested advances in
6 fire prevention through the installation of automatic
7 sprinkler systems in existing buildings have yet to be
8 fully implemented;

9 (2) fire departments responded to approxi-
10 mately 1,700,000 fires in 2003;

11 (3) there were 3,925 civilian deaths and 18,125
12 civilian injuries resulting from fire in the United
13 States in 2003;

14 (4) 111 firefighters were killed in 2003;

15 (5) fire caused \$12,300,000,000 in direct prop-
16 erty damage in 2003, and sprinklers are responsible
17 for a 70 percent reduction in property damage from
18 fires in public assembly, educational, residential,
19 commercial, industrial and manufacturing buildings;

20 (6) fire departments respond to a fire every 20
21 seconds, a fire breaks out in a structure every 61
22 seconds and in a residential structure every 79 sec-
23 onds in the United States;

24 (7) the Station Nightclub in West Warwick,
25 Rhode Island, did not contain an automated sprin-

1 kler system and burned down, killing 100 people on
2 February 20, 2003;

3 (8) due to an automated sprinkler system, not
4 a single person was injured from a fire beginning in
5 the Fine Line Music Café in Minneapolis after the
6 use of pyrotechnics on February 17, 2003;

7 (9) the National Fire Protection Association
8 has no record of a fire killing more than 2 people
9 in a completely sprinklered public assembly, edu-
10 cational, institutional or residential building where
11 the system was properly installed and fully oper-
12 ational;

13 (10) sprinkler systems dramatically improve the
14 chances of survival of those who cannot save them-
15 selves, specifically older adults, young children and
16 people with disabilities;

17 (11) the financial cost of upgrading fire counter
18 measures in buildings built prior to fire safety codes
19 is prohibitive for most property owners;

20 (12) many State and local governments lack
21 any requirements for new structures to contain auto-
22 matic sprinkler systems;

23 (13) under the present straight-line method of
24 depreciation, there is a disincentive for building safe-

1 ty improvements due to an extremely low rate of re-
 2 turn on investment; and

3 (14) the Nation is in need of incentives for the
 4 voluntary installation and retrofitting of buildings
 5 with automated sprinkler systems to save the lives of
 6 countless individuals and responding firefighters as
 7 well as drastically reduce the costs from property
 8 damage.

9 **SEC. 3. CLASSIFICATION OF AUTOMATIC FIRE SPRINKLER**
 10 **SYSTEMS.**

11 (a) IN GENERAL.—Subparagraph (B) of section
 12 168(e)(3) of the Internal Revenue Code of 1986 (relating
 13 to 5-year property) is amended by striking “and” at the
 14 end of clause (V), by striking the period at the end of
 15 clause (vi) and inserting “, and ”, and by adding at the
 16 end the following:

17 “(vii) any automatic fire sprinkler sys-
 18 tem placed in service after April 11, 2003,
 19 in a building structure which was placed in
 20 service before such date.”.

21 (b) ALTERNATIVE SYSEM.—The table contained in
 22 section 168(g)(3)(B) of the Internal Revenue Code of
 23 1986 is amended by inserting after the third item the fol-
 24 lowing:

“(B)(vii) 7”.

1 (c) DEFINITION OF AUTOMATIC FIRE SPRINKLER
2 SYSTEM.—Subsection (i) of section 168 of the Internal
3 Revenue Code of 1986 is amended by adding at the end
4 the following:

5 “(17) AUTOMATED FIRE SPRINKLER SYSTEM.—
6 The term ‘automated fire sprinkler system’ means
7 those sprinkler systems classified under one or more
8 of the following publications of the National Fire
9 Protection Association—

10 “(A) NFPA 13, Installation of Sprinkler
11 Systems,

12 “(B) NFPA 13 D, Installation of Sprin-
13 kler Systems in One and Two Family Dwellings
14 and Manufactured Homes, and

15 “(C) NFPA 13 R, Installation of Sprinkler
16 Systems in Residential Occupancies up to and
17 Including Four Stories in Height.”.

18 (d) EFFECTIVE DATE.—The amendments made by
19 this section shall apply to property placed in service after
20 April 11, 2003.

○